

mixture of a suspension and a solution, the mixture containing the lignite is introduced into a reactor and, without the supplying of air or oxygen to the reactor, is activated alkaline and within a period of up to about 0.5 hour is heated to an oxidation temperature of below 100°C whereupon oxidizing gas comprising air or oxygen or mixtures thereof is injected into the mixture, the oxidizing gas being at atmospheric pressure and the mixtures of air and oxygen having oxygen partial pressures of about 0.02 to less than 0.1 MPa, terminating the injection of the oxidizing gas and cooling the mixture.

13. The method according to claim 11 or 12, in which the oxidation is effected by contacting the lignite with air or oxygen or a mixture of air and oxygen and the ammonia concentration of the aqueous ammoniacal medium is up to about 7%.

14. The method of claim 11 or 12, wherein the lignite is particulate.

15. The method of claim 11 or 12, wherein the oxidizing is effected over a period of about 0.25 to about 4 hours.

16. The method of claim 11 or 12, wherein the lignite is in admixture with at least one substance selected from the group consisting of lignins from pulp-making, lignins from wood hydrolysis, lignocellulose from steam explosion pulping for the production of fibrous materials, wood particles and bark particles.

17. The method of claim 11 or 12, further comprising a step of adding a macro or micro nutrient thereby to incorporate the nutrient in the fertilizer.

18. The method of claim 17, wherein the nutrient is phosphorous.

19. An organic fertilizer of humic-like nature prepared by the method of claim 11 or 12 having a C/N ratio of about 9 to about 15 wherein various proportions of the nitrogen are chemically bonded as follows,

20-45% as ammonium nitrogen and

55-80% organically bonded,

of said organically bonded nitrogen,

up to 20% being organically bonded as amide, and

up to 80% being organically bonded more strongly than amide.

20. The organic fertilizer according to claim 19, wherein the nitrogen content is up to about 6%.

21. A method of improving the crop yield and quality of soil, comprising applying the fertilizer of claim 19 thereto.